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FitQuest: Does an active mobile phone game encourage children to take more exercise at school?

Submission date	Recruitment status	[_] Prospectively registered
23/02/2015	No longer recruiting	[_] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
04/03/2015	Completed	[X] Results
Last Edited	**Condition category**	[X] Individual participant data
04/04/2023	Other	

Plain English summary of protocol

Background and study aims
Physical activity has important health benefits for children, but many children do not meet recommended guidelines for the amount of physical activity they take each day. The purpose of this study is to investigate whether an active smart phone game (called FitQuest) which involves running in a playground can motivate children to become more enthusiastic about exercising, and whether that enthusiasm might change their behaviour.

Who can participate?
Year 7 pupils attending a state-funded primary school in Edinburgh, Scotland.

What does the study involve?
Schools are randomly allocated to one of two groups: Exergame group or no exergame group. Pupils from the schools in the exergame group play the FitQuest game during Physical Education lessons in their school for five weeks. Pupils from the schoos in the no exergame group take part in the normal Physical Education classes as provided by the school.

What are the possible benefits and risks of participating?
The potential benefits are improvements in confidence towards exercise and possibly increased levels of physical activity. The potential risks are very low - minor risk of tripping and falling similar to any out of door Physical Education class.

Where is the study run from?
Selected Edinburgh primary schools were invited to take part by development officers within Edinburgh City Council.

When is the study starting and how long is it expected to run for?
From May 2013 to May 2014.

Who is funding the study?
Funded by an Engineering and Physical Sciences Research Council

(EPSRC) Impact Acceleration Account at Heriot-Watt University. Note that the Principal Investigator has now moved to University of Edinburgh.

Who is the main contact?
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Contact information

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Public

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Scientific

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Additional identifiers

Protocol serial number
F12R10074

Study information

Scientific Title
A cluster randomised trial and qualitative study of the effectiveness of a location-based exergame on school children’s physical activity

Study objectives

Participants who use FitQuest (an exergame) for a 5 week intervention (for one hour per week during Physical Education lessons) will have increased step count, time spent in MVPA and self-efficacy scores post-test than participants who take part in normal Physical Education lessons as provided by the school.

Ethics approval required
Old ethics approval format

Ethics approval(s)
This study was approved by the School of Life Sciences Ethics Committee at Heriot-Watt University, Scotland on 04/09/13. Written permission to conduct a study in the schools was given by Edinburgh City Council, Scotland (25/06/2013).

Study design
Single centre interventional trial with a cluster randomised control design

Primary study design
Interventional

Study type(s)
Prevention

Health condition(s) or problem(s) studied
This study is about the promotion of sustained physical activity in children.

Interventions
Participants in the intervention arm played an exergame for one hour per week during Physical Education Lessons. Control arm participants took part in the normal Physical Education classes as provided by the school.

Intervention Type
Behavioural

Primary outcome(s)
1. Step count (as measured by NL1000 accelerometer)
2. Minutes spent in MVPA (as measured by NL1000 accelerometer)
3. Self-Efficacy for physical activity, as measured by Pender questionnaire

All measures will be taken in the weeks immediately before and after the intervention (or equivalent time elapsed for control)

Key secondary outcome(s))
Qualitative data will be gathered from interviews with children, teachers. Observation notes will be recorded at each session.

Completion date
01/05/2014

Eligibility

Key inclusion criteria
1. Primary seven pupils (usually aged 10-11)
2. Attending a state-funded primary school in Edinburgh, Scotland.
3. The school head teacher and PE must have agreed to take part.
4. Both male or female participants are eligible

Participant type(s)
Other

Healthy volunteers allowed
No

Age group
Child

Lower age limit
10 years

Upper age limit
11 years

Sex
All

Key exclusion criteria
Lack of parental consent

Date of first enrolment
01/06/2013

Date of final enrolment
01/09/2014

Locations

Countries of recruitment
United Kingdom

Scotland

Study participating centre
Heriot-Watt University
Earl Mounbatten Building
Heriot Watt University
Edinburgh
United Kingdom
EH14 4AS

Sponsor information

Organisation
Heriot-Watt University

ROR
https://ror.org/04mghma93

Funder(s)

Funder type
Research council

Funder Name
Engineering and Physical Sciences Research Council

Results and Publications

Individual participant data (IPD) sharing plan
Not provided at time of registration

IPD sharing plan summary
Other

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	22/08/2016		Yes	No
Dataset	FitQuest Qualitative DataSet	09/05/2016	04/04/2023	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Study website	Study website	11/11/2025	11/11/2025	No	Yes